

Promenade Street Interlocking Tower
(Northeast Corridor Project)
At Promenade Street, between The Union Station
Viaduct and the East Side Tunnel viaduct
Providence
Providence County
Rhode Island

HAER No. RI-23

HAER
RI,
4-PROV,
178-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

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(Northeast Corridor Project)

HAER No. RI-23

Location: At Promenade Street, between the Union Station Rail viaduct and East Side Tunnel viaduct, Providence, Rhode Island

Date of Construction: 1909

Present Owner: Amtrak

Present Use: Interlocking tower

Significance: The structure houses the interlocking and signal equipment which regulates all train movements on the east end of Union Station for the main rail line to Boston and for the east side branch to Bristol.

Project Information: The Promenade Street Interlocking Tower will be affected by the Northeast Corridor Improvement Project of the Federal Railroad Administration. Mitigative documentation prepared by DeLeuw, Cather/Parsons, Washington, D. C., for the U. S. Department of Transportation, September 1983.

Historian: Janice G. Artemel

(For overview history and bibliography, see PROVIDENCE COVE LANDS,
HAER No. RI-24) HAER RI, 4-PROV, 175-

HISTORICAL INFORMATION

The Promenade Street interlocking plant, housed in the tower at the east end of the station, was installed in 1909. It is a three-story concrete structure with steel reinforcement and a Mediterranean-style hipped roof. This is a common architectural form throughout New York, New Haven & Hartford Railroad territory. Similar structures remain on the Northeast Corridor in Westerly, Central Fall, and Pawtucket (Lawn and Boston Switch), Rhode Island; Bridgeport and Cos Cob, Connecticut; and Rye and New Rochelle, New York. All train movements on the east end of the station are controlled from this tower for both the main Amtrak line north and to the former eastside branch to Bristol.

The original Union Switch and Signal electro-mechanical machine had a control panel with seventy-seven levers, thirty-eight of them to control seventy-seven switches, thirty M.P. frogs and one derail, and thirty-three of them control fifty-three signals. There were six spare spaces (Droege). The switches and signals were controlled by electricity, and the lock and bed were mechanical (R. A. Lillquist, Communication 1983). This type of machine had its origin in 1908 when electrical and mechanical levers were combined in a manner that a common, locking bed would assure safety and facility of operation (American Railway Signaling Principles and Practices, 1949, 9).

The tower controlled 266 track movements from the Smith Street Bridge to Union Station. Power was drawn from internal dynamos as well as from the Bristol-Warren eastside line and the local power company, Narragansett Electric. A new all-relay interlocking was put into service in 1946 with a forty-four lever machine which eliminated cumbersome lever locking beds.